Gender Differences in Intuitive Eating and Factors That Negatively Influence Intuitive Eating

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Abstract

Research on intuitive eating has examined some correlates of intuitive eating, but is still rather limited. The current study was the first to examine gender differences in levels of intuitive eating. This study also assessed perceptions of an adaptive diet, and expanded on previous research assessing factors that negatively predict intuitive eating. Data was obtained from 259 college men and women by a self-report survey. Results indicated that men had higher total intuitive eating levels and were more likely to eat for physical rather than emotional reasons than women and that participants had a slightly skewed idea of an adaptive diet. Results also indicated that certain factors negatively influence intuitive eating such as: (1) perceptions of caregiver use of coercive feeding strategies, (2) being around individuals who are obsessed with food and weight, and (3) maladaptive personality characteristics (i.e. negative affect, depression, body dissatisfaction, low levels of body appreciation, maladaptive perfectionism, low levels of self-esteem, and low levels optimism).

Gender Differences in Intuitive Eating and Factors That Negatively Influence Intuitive Eating

Intuitive eating is eating according to your internal, biological hunger signals rather than situational or emotional signals (Tribole & Resch, 2003). There are three constructs that compose intuitive eating: unconditional permission to eat; eating for physical hunger, not to cope with emotions; and reliance on internal hunger and satiety signals to govern eating. The first construct, unconditional permission to eat, is allowing oneself to eat whatever the body desires. Individuals who deny themselves permission to eat foods that their body is craving become preoccupied with that food, making them more likely to binge on that particular food. The second construct of intuitive eating, eating for physical hunger, not to cope with emotions, is eating only when the body is physically hunger rather than "psychologically hungry," meaning not eating for emotional or situation reasons such as sadness or boredom. The third and final construct, relying on internal hunger and satiety cues to govern eating, requires individuals to pay attention to their inborn hunger and satiety cues. Over time, people are exposed to external messages from caregivers, friends, partners, and media that can negatively influence a person's ability to eat according to their internal hunger and satiety cues. All three constructs must be present for intuitive eating to occur.

Intuitive Eating and Well-Being

The ability to eat intuitively is associated with well-being above and beyond low levels of eating disorder symptomatology (Tylka & Wilcox, 2006). Intuitive eating is also linked to increased psychological well-being (i.e. self-esteem, life satisfaction, proactive coping, optimism, positive affect), better interoceptive awareness, lower levels

of eating disorder symptomatology, lower BMI (body mass index), and lower body dissatisfaction. This information warrants intensive exploration of factors that are linked to intuitive eating, but the construct of intuitive eating is rather new, resulting in somewhat limited research on the topic. This study was conducted to assess what factors negatively influence a person's ability to eat intuitively as well as any distinct gender differences in intuitive eating.

There is no set definition for what constitutes healthy eating, but it has been suggested that intuitive eating and its constructs may represent healthy, adaptive eating (Tribole & Resch, 2003). The Intuitive Eating Scale (IES; Tylka, 2006) is a psychometrically sound measure of the construct of intuitive eating, and is reflective of an individual's ability to eat intuitively. However, the IES does not determine individuals' perceptions of a healthy, adaptive diet. Thus, the Healthy Eating Scale was created for this study to assess individuals' perceptions of adaptive eating. People may have a skewed idea of what constitutes adaptive eating because society tells people that healthy eating involves eating lots of fruits, vegetables, and lean protein, while restricting or completely eliminating fats and sweets. People may internalize this idea of "healthy eating," promoting restricted eating which leads to lower psychological well-being and maladaptive eating (Tribole & Resch, 2003). It is predicted that individuals do not have accurate perceptions of adaptive eating.

No studies have been conducted examining gender differences in intuitive eating. This is worth researching because while similar, intuitive eating and eating disorders are not just opposite poles of the same construct, and studies have shown that there are distinct gender differences in disordered eating (i.e. Meyer & Waller, 1998; Murnen &

Smolak, 1997; Tata, Fox, & Cooper, 2001; Walcott, Pratt, & Patel, 2003). According to the Diagnostic and Statistical Manual of Mental Disorders, fourth edition, text revision (DSM-IV-TR), women outnumber men 10 to 1 in the prevalence of eating disorders (American Psychiatric Association, 2000). Research comparing the levels of men and women's eating disorder symptomatology using the EAT and EDI measures found that women's levels were much higher than men's (Tata et al., 2001; Meyer & Waller, 1998). This study will assess if there are distinct differences between gender and intuitive eating behaviors. It is predicted that men will be more in touch with their intuitive eater than women.

Caregiver Influence

There is overwhelming evidence to support the theory that children adopt eating attitudes and behaviors based on their parents eating attitudes and behaviors, as well as the messages that they send children about the child's eating behaviors (i.e. Birch, 1999; Birch & Fisher, 2000; Cutting, Fisher, Grimm-Thomas, & Birch, 1999; Fisher & Birch, 1999). It is also suggested that when parents send negative messages to their children about their eating behaviors, body weight/shape, and physical appearance, the risk of negative body image and eating disorder symptomatology increase (Striegel-Moore & Kearney-Cooke, 1994; Smolak, Levine, & Schermer, 1999). Some examples of these eating messages and behaviors parents impose on their children are rigid schedules, portion size restriction, and comments about eating behaviors (i.e. too much or too little). Leann Birch has done many studies on childhood eating and has found that restricted childhood eating can lead to more body dissatisfaction, higher BMI, and higher levels of

eating disorder symptomatology (Birch, 1999; Birch & Fisher, 2000; Cutting et al., 1999; Fisher & Birch, 1999).

Parents often attempt to control their children's eating habits by using coercive feeding strategies (i.e. restricting certain foods). Birch (1999) discovered that when parents withhold certain foods from their children, that particular food actually becomes more desirable to the child. This behavior results in the child choosing these restricted foods over others when they are given the opportunity to eat these restricted foods. Also, parents labeling certain foods as "good" or "bad" backfires as children tend to desire the "bad" foods more than the "good" foods. These behaviors often carry over into adulthood, resulting in higher levels of disordered eating and obesity (Cutting et al., 1999).

While Birch's research has studied the effect of caregiver messages on childhood eating behaviors, she has not directly studied intuitive eating. This study will be extending her research to see if caregiver messages are directly related to intuitive eating. The Caregiver Eating Messages Scale was created for this study to assess if parental use of coercive feeding strategies is associated with an individual's ability to eat intuitively as an adult. It is predicted that such parental/caregiver messages negatively influence children's eating behaviors, specifically their ability to eat intuitively. If this hypothesis is supported, there will be more evidence for the adaptive properties of intuitive eating.

There is also strong evidence suggesting that children who have parents that chronically diet are more likely to become chronic dieters and/or adopt eating disorder symptomatology (i.e. Edmunds & Hill, 1999; Keel, Heatherton, Harnden, & Hornig, 1997; Smolak, Levine, & Schermer, 1999). Research has indicated that both mothers and

fathers have an influence on their children's attitudes toward food and dieting. Daughter's weight dissatisfaction has been shown to be associated with their father's own weight dissatisfaction, which is associated with increased dieting and eating disorder symptoms in adolescent females (Keel et al., 1997). Mothers with children who have eating disorders often have a history of dieting themselves. Children tend to model dieting behavior exhibited by their parents which lead to disordered eating (Edmunds & Hill, 1999; Keel et al., 1997).

There is much research on the association between dieting and weight preoccupation in an individual's environment and eating disordered behavior, but none of this research has been focused on intuitive eating. The Dieting Others Scale, and the Person in Environment question were created specifically for this study to assess the association between dieting and weight preoccupation in an individual's environment and intuitive eating. For this study, it is predicted that people in an individual's environment who are consumed with dieting and being thin will increase the likelihood that the individual will report lower intuitive eating.

Personality Characteristics

Many personality characteristics (i.e. negative affect, pessimism, low self-esteem, negative body image, maladaptive perfectionism) have been linked to increased risks of developing eating disorder symptomatology (i.e. Fairburn, Cooper, Doll, & Welch, 1999; Fairburn, Doll, Welch, Hay, Davies, & O'Connor, 1998; Leon, Fulkerson, Perry, Keel, & Klump, 1999; Vohs, Bardone, Joiner, Abramson, & Heatherton, 1999). Maladaptive perfectionism is a personality trait that is commonly linked to anorexia, bulimia, and binge eating disorder (i.e. Fairburn et al., 1999; Fairburn et al., 1998; Fairburn, Welch,

Doll, Davies, & O'Connor, 1997; Tyrka, Waldron, Graber, & Brooks-Gunn, 2002; Vohs et al., 1999). Because individuals have an intense desire to be perfect, but can never achieve their ideal levels of perfection, they begin to diet to achieve physical perfection which is associated with disordered eating behaviors. Other personality characteristics such as negative affect, low self-esteem, and body dissatisfaction are also commonly linked with eating disorder symptomatology (i.e. Leon et al., 1999; Tyrka et al., 2002; Vohs et al., 1999).

Existing literature consistently displays the links of certain personality characteristics with disordered eating, but there are, to my knowledge, no current studies linking these personality characteristics with intuitive eating for both men and women. Tylka (2006) examined the relationship between intuitive eating and certain personality characteristics among college women, and found scores on the IES were negatively related to body dissatisfaction, poor interoceptive awareness, pressure for thinness, internalization of the thin ideal, and body mass. This study will assess the following personality characteristics and their link with intuitive eating ability among men and women: negative affect (including depression), body appreciation, body dissatisfaction, optimism, maladaptive perfectionism, and self-esteem. It is predicted that certain personality characteristics will be associated with lower intuitive eating, and higher chronic dieting and eating disorder symptomatology.

Sociocultural Pressures for Thinness

Many studies conducted on men and women's negative body image suggest that these negative emotions are caused by an internalization of the media's focus on thinness and weight (i.e. Agliata & Tantleff-Dunn, 2004; Groesz, Levine, & Murnen, 2002;

Heinberg & Thompson, 1995; Mills, Polivy, Herman, & Tiggeman, 2002; Rodin, Silberstein, & Striegel-Moore, 1985). Several of these studies examining the internalization of the "thin-ideal" proposed by the media have found that this internalization can lead to eating disorder symptomatology, depression, and higher levels of body dissatisfaction in women and men (Agliata & Tantleff-Dunn, 2004; Fredrickson & Roberts, 1997; Stice, Nemeroff, & Shaw 1996). Because this internalized ideal is unattainable for most individuals, negative body image and body shame often occur (Noll & Fredrickson, 1998). This negative body image and body shame can lead to negative mental health and well-being, which then predicts disordered eating (Frederickson & Roberts, 1997; Moradi & Subich, 2002).

While these studies have examine the effects of internalizing media ideals of thinness on disordered eating, there have not been studies to determine if this same internalization is associated with lower intuitive eating. It is important to study this because again, intuitive eating is not just the opposite of disordered eating (Tylka & Wilcox, 2006). This study will also assess the relationship between sociocultural pressures for thinness and intuitive eating. It is predicted that the greater the internalization of the media's thin-ideal, the lower the individual's tendency to eat intuitively.

In sum, several hypotheses were created for this study, which were grounded in previous literature on intuitive eating and eating behaviors. As previously mentioned, this study proposes: (1) men have higher levels of intuitive eating than women, (2) people have a skewed idea of adaptive eating, (3) parental/caregiver eating messages and habits predict children's eating behaviors, (4) being around people who are consumed with

dieting and being thin will be associated with intuitive eating in a negative direction, (5) certain maladaptive personality characteristics are associated with lower levels of intuitive eating, and higher levels of eating disorder symptomatology, and (6) societal/media messages are negatively associated with intuitive eating, and positively associated with eating disorder symptomatology.

Method

Participants

A sample consisting of 259 participants was used to test these hypotheses. Participants were college students ranging in age from 18-61 (M = 22.74, SD = 7.58) recruited from various classes at The Ohio State University and Marion Technical College. The participants consisted of 178 females, 80 males, and 1 individual who marked both genders. Most participants (91.5%) identified as Caucasian, followed in frequency by African-American (3.1%), Asian American (2.7%), other (multiracial) (2.3%), and Native American (0.4%). In terms of relationship status, 41.3% of participants were single, 36.3% were involved in a long-term relationship, 13.1% were married, 3.5% were divorced, and 5.8% indicated "other" (e.g. short-term relationship, separated). A large majority of the participants were first-year students or high school seniors (52.5%); of the remaining participants, 19.36% were sophomores, 14.7% were juniors, 4.6% were seniors, 1.5% were post-baccalaureate students, 2.3% were graduate students, 3.9% indicated "other" but did not specify school status, and three participants (1.2%) did not answer this question. Most participants reported being middle class (49.4%), followed by working class (23.2%), upper-middle class (22.4%), upper class (3.1%), and five participants (1.9%) left this question blank. Participants height ranged

from 59-79 inches (M = 66.71, SD = 4.03), and their weight ranged from 98-360 pounds (M = 160.04, SD = 41.46). These data were obtained from the demographic data sheet presented in Appendix A.

Measures

Intuitive eating. The Intuitive Eating Scale (IES; Tylka, 2006, Appendix B) is a 21 item scale psychometrically sound measure of the construct of intuitive eating. This scale consists of three subscales that measure their respective constructs of intuitive eating. The first subscale represents unconditional permission to eat, and contains 9 items (e.g. "If I am craving a certain food, I allow myself to have it."). The second subscale measures eating for physical rather than emotional reasons, and contains 6 items (e.g. " I find myself eating when I am bored, even when I'm not physically hungry."). The third subscale assessed reliance on internal hunger and satiety cues to govern eating, and also contains 6 items (e.g. "I trust my body to tell me how much to eat."). All items were rated on a 5-point scale with 1 being "Strongly Disagree," and 5 being "Strongly Agree." Items for each subscale, as well as the entire Intuitive Eating Scale were averaged. High scores on the entire scale indicate high levels of intuitive eating ability. High scores on each subscale indicate higher abilities of adhering to each construct. Tylka (2006) reported that this measure demonstrated acceptable internal consistency reliability (Cronbach's coefficient α = .89) for the total Intuitive Eating Scale. Reported Chronbach alphas from the same study for the Unconditional Permission to Eat subscale, the Eating for Physical Rather than Emotional Reasons subscale, and the Reliance on Internal Hunger and Satiety Cues to Govern Eating subscale were 0.89, 0.86, and 0.72 respectively. Cronbach's coefficient alpha for the entire Intuitive Eating Scale, the

Unconditional Permission to Eat subscale, the Eating for Physical Rather than Emotional Reasons subscale, and the Reliance on Internal Hunger and Satiety Cues to Govern Eating subscale were 0.85, 0.86, 0.85, and 0.67 respectively.

Caregiver eating messages. A measure was created for this study (Caregiver Eating Messages Scale, Appendix C) because no measure currently exists to examine the relationship between negative eating messages (i.e. coercive feeding strategies) children receive from their caregivers. This is a 22 item scale with items ranged on a 6-point scale with 1 being "Always," and 6 being "Never." Participants were given prompts such as: "Made sure you finished all the food that was on your plate," or, "Commented that you weren't eating enough," and were asked to indicate the degree to which their parents/caregivers emphasized the given behavior while they were growing up. Items 20 and 21 of this scale were focused more on body acceptance by family members, and were ranged on a 5 point scale (1=Never, 5=Always). These two items were not used in the analysis because similar items were analyzed in the Body Acceptance by Others Scale. Item 22 of this scale asks participants to determine the overall focus on food and weight of parent/caregivers while growing up, and was ranked on a 6 point scale with 1 being "Not at all focused on food or weight," and 6 being, "Extremely focused on food and weight." Items 1 through 19 were averaged with high scores indicating high levels of coercive feeding strategies used by caregivers while growing up. Items 20 and 21 were eliminated from the analysis, and item 22 was used in a multiple regression analysis. Cronbach's alpha for items 1 through 19 of this study was 0.83.

Healthy eating. A measure was also created for this study to examine individuals' concepts of an adaptive diet (Healthy Eating Scale, Appendix D). This scale contains 16

items that are ranged on a 5-point scale with 1 being "Never," and 5 being "Always." Participants were given certain types of food groups (i.e. "assorted fibrous vegetables," or "whole grain bread, brown rice, whole grain pasta"), or items such as "no food restriction," or "unlimited calorie intake," and were asked to circle if/how much that item would be included in an adaptive diet. Items were averaged with higher scores correlating with higher levels of intuitive eating ability. Cronbach's alpha for this study was 0.76.

Dieting others. Another measure was created for this study to examine the impact of people who are preoccupied with dieting and losing weight in an individual's environment (Dieting Others Scale, Appendix E). This scale contains 8 items ranged on a 5-point scale (1=Never, 5=Always). Participants were asked questions such as: "How often do your family members talk about their weight?" and "How often do your friends talk about dieting or food restriction?" All items were averaged with high scores indicating high levels of dieting/food and weight preoccupied people in an individual's environment. Cronbach's coefficient alpha for this study was 0.86.

A single question about people in an individual's environment was also created to use in multiple regression analyses (People in Environment). Participants were provided with 5 choices (Overall, people in my environment are _____ focused on food and weight.) with 1 being never, 2 being rarely, 3 being sometimes, 4 being often, and 5 being always. Participants were asked to place an X beside the choice that best described people in their environment.

Personality characteristics. The first personality characteristic that was assessed in this study was depression, using the Beck Depression Inventory (BDI; Beck, Rush,

Shaw, & Emery, 1979, Appendix G). This measure is comprised of 21 questions. Each question has 4 choices (i.e. 0,1,2,3) unique to each question, with 0 being the least depressed choice, and 3 being the most depressed choice. All items are averaged with high scores indicating higher levels of depression. Previous Cronbach's alphas for this measure's scores have been noted as 0.91 (Schotte, Maes, Cluydts, De Doncker, & Cosyns, 1997). For the current study, Cronbach's alpha was 0.90.

The next personality characteristic that was analyzed was body appreciation which was measured using the Body Appreciation Scale (BAS; Avalos, Tylka, & Wood-Barcalow, 2005, Appendix H). This 13 item scale is ranked on a 5-point scale with 1 being "Never," and 5 being "Always." Example items from this survey include, "I feel good about my body," and "Despite its flaws, I accept my body for what it is." Items are averaged with high scores indicating higher levels of body appreciation. Previous Cronbach's alphas found for this scale's scores have been 0.91-0.94 (Avalos et al., 2005). Chronbach's coefficient alpha for the current study was 0.93.

Perfectionism was assessed using the Almost Perfect Scale-Revised (APS-R; Slaney, Rice, Mobley, Trippi, & Ashby, 2001, Appendix I). This is a 23 item scale with items 1 to 12 creating the Maladaptive Perfectionism Subscale, and items 13 to 23 creating the Adaptive Perfectionism Subscale. Participants are asked to number each item from 1 to 7 with 1 being "Strongly Disagree," and 7 being "Strongly Agree." Items from each subscale are averaged with high scores on the Maladaptive Perfectionism Subscale indicating high levels of maladaptive perfectionism and high scores on the Adaptive Perfectionism Subscale indicating high levels of adaptive perfectionism. Previous Cronbach's alphas for the maladaptive and adaptive perfectionism subscale

scores have been reported as 0.93 and 0.84 respectively (Pearson & Gleaves, 2006). Cronbach's coefficient alpha for the Maladaptive Perfectionism Subscale in this study was 0.94, while alpha for the Adaptive Perfectionism Subscale in this study was 0.89.

Self-esteem was analyzed using the Rosenberg Self-Esteem Scale (RSE; Rosenberg, 1965, Appendix J). This is a 10 item scale, with items such as, "I feel that I have a number of good qualities." Items were rated on a 4-point scale with 1 being "Strongly Disagree," and 4 being "Strongly Agree." All items were averaged with higher scores indicating high levels of self-esteem. Scores on the RSE have been shown to demonstrate good internal consistency reliability (Cronbach's $\alpha = .89$), test-retest reliability ($r = .85$), and convergent validity as it is moderately with other measures of self-esteem (Robinson & Shaver, 1973). Cronbach's alpha for this measure was 0.90.

Another personality characteristic that was assessed was affect. This was measured using the Positive and Negative Affect Scale (PANAS; Watson, Clark, & Tellegen, 1988b, Appendix M). This is a 20 item scale, where participants number each item from 1 to 5 with 1 equaling "Very slightly or not at all," and 5 equaling "Extremely." Answers are supposed to represent the participant's average affect rather than their affect at the given time. Ten of the items are words indicating positive affect (i.e. "attentive," and "strong"), comprising the Positive Affect Subscale. The other ten items are words indicating negative affect (i.e. "irritable," and "guilty"), and make up the Negative Affect Subscale. Cronbach's alpha for the Positive Affect Subscale are generally 0.88 to 0.90, while alpha for the Negative Affect Subscale are 0.84 to 0.87 (Crawford & Henry, 2004). Cronbach's coefficient alphas for the Positive Affect and Negative Affect subscale scores for this study were 0.88 and 0.89 respectively.

Body dissatisfaction was measured using the Body Dissatisfaction Subscale of the Eating Disorder Inventory-2 (BD EDI-2; Garner, 1991, Appendix O). This subscale of the EDI-2 is a 9 item scale measuring the acceptance of an individual's own body/body parts. Sample items from this scale are, "I think that my stomach is too big," and "I think that my thighs are too large." Items are ranked on a 6-point scale with 1 being "Always," and 6 being "Never." All items are averaged with high scores indicating high levels of body dissatisfaction. Test-retest reliability of this measure's scores over a three week period was 0.97 (Wear & Pratz, 1987). Previous studies using college women have yielded Cronbach's alphas of 0.91 (Brookings & Wilson, 1994). Cronbach's coefficient alpha for the current study was also 0.91.

The final personality characteristic that was analyzed in this study was optimism, which was measured using the Life Orientation Test- Revised (LOT-R; Scheier, Carver, & Bridges, 1994, Appendix P). This is a 7 item scale containing items such as: "In uncertain times, I usually expect the best." All items are ranged on a 4-point scale with 1 being "Strongly Disagree," and 4 being "Strongly Agree." With the exception of item 4 which is a filler item ("It's important for me to keep busy."), items are averaged with high scores indicating high levels of optimism. Internal consistency reliability scores from previous studies using college students have been 0.82 (Sheier et al., 1994). Cronbach's alpha for this study was also 0.82.

Societal/media messages. Internalization of media messages was measured using the Internalization Subscale of the Sociocultural Attitudes Toward Appearance Questionnaire (SATAQ; Heinberg, Thompson, & Stormer, 1995, Appendix K). This scale contains 8 items such as, "Photographs of thin women make me wish that I were

thin," and, "Music videos that show thin models make me wish that I were thin." Items were rated on a 5-point scale with 1 being "Definitely Disagree," and 5 being "Definitely Agree." All items were averaged with high scores indicating high levels of internalization of the thin-ideal proposed by the media. Scores on this scale have shown internal consistency reliability in previous studies using college women, with Cronbach's alpha equaling 0.88 (Heinber et al., 1995). Cronbach's coefficient alpha for this study was 0.90.

External pressures to lose weight were assessed using the Perceived Sociocultural Pressures Scale (PSPS; Stice, Ziemba, Margolis, & Flick, 1996, Appendix L). This is an 8 item scale with sample items such as, "I've felt pressure from my friends to lose weight," and, "I've noticed a strong message from people I've dated to have a thin body." Items were rated on a 5 point scale with 1 being "Never," and 5 being "Always." All items were averaged with high scores indicating high levels of perceived pressures to lose weight/be thin. For this scale's scores, Cronbach's alpha has previously been found to be 0.87, and test-retest reliability over a two week period was 0.93 among college women (Stice et al., 1996). For the current study, Cronbach's alpha was 0.87.

Perceived acceptance of an individual's body weight and shape by others was measured using the Body Acceptance by Others Scale (BAOS; Avalos & Tylka, 2006, Appendix N). This is a 10 item scale with items rated on a 5 point scale with 1 being "Never," and 5 being "Always." An example item from this survey is "I've felt acceptance from my friends regarding my body shape and/or weight." All 10 items were averaged, with high scores indicating high levels of perceived acceptance of body weight/shape by others. Cronbach's coefficient alpha for this measure was 0.93.

Procedure

Participants were recruited through several different courses at either The Ohio State University or Marion Technical College during winter and spring quarters of 2008. Participants were informed of the purpose of the study (to determine gender differences in eating habits and factors that impact eating behaviors, such as personality variables and family influences), that it was anonymous, and that completing the survey was optional. All participants who opted to participate in the study were allowed to take the survey home to complete it, and returned it during the next class period. Students were allowed to replace a given assignment with the completion of the survey or received extra credit for their participation.

Results

Descriptive and Preliminary Analyses

Measures that had more than 25% of data points missing were dropped from the study. Otherwise, missing data points were handled by substituting participants' mean scale score for the missing value. Table 1 presents the correlations, means, and standard deviations of the various measures used in this study. For intuitive eating, the subscales all correlated with each other and the total scale in the expected direction. The use of coercive feeding strategies by caregivers was associated in a negative direction to intuitive eating and its respective constructs as hypothesized. Also, being around people who are consumed with dieting and being thin was associated in a negative direction to intuitive eating and its constructs as predicted. Intuitive eating was also associated in a negative direction to all of the maladaptive personality characteristics assessed in this

study (depression, body dissatisfaction, maladaptive perfectionism, negative affect, low levels of self-esteem, and pessimism) as expected.

Gender Differences in Intuitive Eating

An independent t-test was conducted to determine if men have higher levels of intuitive eating than women. As predicted, total intuitive eating scores (t [2, 256] = -2.42, $p < .05$) and eating for physical rather than emotional reasons (t [2, 256] = -2.41, $p < .05$) indicated significant gender differences, with men having higher intuitive eating average scores than women. Contrary to the hypothesis, unconditional permission to eat (t [2, 256] = -1.68, *ns*) and reliance on internal hunger and satiety cues to govern eating (t [2, 256] = -1.68, *ns*) did not indicate significant gender differences. Results of these analyses, as well as means and standard deviations for women's and men's IES scores, are indicated in Table 2.

Perceptions of Adaptive Eating

Standard correlations between the Healthy Eating Scale and the Intuitive Eating Scale and its respective subscales were used to determine if individuals have skewed ideas of adaptive eating as hypothesized. As predicted, intuitive eating ($r = .30$, $p < .05$) and unconditional permission to eat ($r = .39$, $p < .05$) were associated with higher levels of adaptive diet perceptions. However, eating for physical rather than emotional reasons ($r = .04$, *ns*), and reliance on internal hunger and satiety cues to govern eating ($r = .12$, *ns*) were not associated with adaptive diet perceptions. Results from these analyses are presented in Table 1.

Caregiver Eating Messages

A standard multiple regression analysis was used to determine whether the hypothesis that suggested that increased use of coercive feeding strategies by caregivers would be associated with lower levels of intuitive eating, predicted unique variance in intuitive eating. This analysis showed that caregiver use of coercive feeding strategies as well as the overall focus on food and weight by caregivers accounted for 15.7% of the variance in intuitive eating (F [2, 251] = 23.36, $p < .05$). Of the two individual factors, both caregiver use of coercive feeding strategies (β = -.32, t [253] = -4.95, $p < .05$) and overall focus of food and weight by caregivers (β = -.14, t [253] = -2.22, $p < .05$) predicted unique variance in intuitive eating as hypothesized.

A second standard multiple regression analysis was used to determine if this hypothesis predicted unique variance in unconditional permission to eat. This analysis showed that caregiver use of coercive feeding strategies as well as the overall focus on food and weight by caregivers accounted for 12.9% of the variance in unconditional permission to eat (F [2, 251] = 18.64, $p < .05$). Of the two individual factors, both caregiver use of coercive feeding strategies (β = -.18, t [253] = -2.80, $p < .05$) and overall focus of food and weight by caregivers (β = -.24, t [253] = -3.77, $p < .05$) predicted unique variance in unconditional permission to eat as hypothesized.

A third standard multiple regression analysis was used to determine if this hypothesis predicted unique variance in eating for physical rather than emotional reasons. This analysis showed that caregiver use of coercive feeding strategies as well as the overall focus on food and weight by caregivers accounted for 8.4% of the variance in eating for physical rather than emotional reasons (F [2, 251] = 11.45, $p < .05$). Of the two individual factors, only caregiver use of coercive feeding strategies predicted unique

variance in eating for physical rather than emotional reasons (β = -.31, t [253] = -4.65, p < .05). Contrary to the hypothesis, overall focus of food and weight by caregivers did not predict unique variance in eating for physical rather than emotional reasons (β = .06, t [253] = .91, *ns*).

A final standard multiple regression analysis was used to determine if this hypothesis predicted unique variance in reliance on internal hunger and satiety cues to govern eating. This analysis showed that caregiver use of coercive feeding strategies as well as the overall focus on food and weight by caregivers accounted for 6.5% of the variance in reliance on internal hunger and satiety cues to govern eating (F [2, 251] = 8.79, p < .05). Of the two individual factors, only caregiver use of coercive feeding strategies predicted unique variance in reliance on internal hunger and satiety cues to govern eating (β = -.23, t [253] = -3.38, p < .05). Contrary to the hypothesis, overall focus of food and weight by caregivers did not predict unique variance in reliance on internal hunger and satiety cues to govern eating (β = -.06, t [253] = -.85, *ns*). Results for these analyses are indicated in Table 3.

Perceptions of Significant Others' Dieting Behaviors

The hypothesis suggesting that the presence of significant others who participants perceive are consumed with dieting and being thin will increase the likelihood that the participants themselves will report lower intuitive eating was analyzed using a standard multiple regression analysis. This analysis showed that being around people who are consumed with dieting and being thin and the overall focus on food and weight by people in an individual's environment accounted for 43.4% of the variance in intuitive eating (F [2, 256] = 29.71, p < .05). However, of the two individual predictors, only being around

people who are consumed with dieting and being thin predicted unique variance in intuitive eating (β = -.33, t [258] = -4.10, $p < .05$). Contrary to the hypothesis, overall focus of food and weight by people in an individual's environment did not predict unique variance in intuitive eating (β = -.14, t [258] = -1.74, *ns*).

A second standard multiple regression analysis was used to determine if this hypothesis predicted unique variance in unconditional permission to eat. This analysis showed that being around people who are consumed with dieting and being thin and the overall focus on food and weight by people in an individual's environment accounted for 43.9% of the variance in unconditional permission to eat (F [2, 256] = 30.51, $p < .05$). Of the two individual factors, both being around people who are consumed with dieting and being thin (β = -.31, t [258] = -3.95, $p < .05$) and overall focus of food and weight by people in an individual's environment (β = -.16, t [258] = -2.00, $p < .05$) predicted unique variance in unconditional permission to eat as hypothesized.

A third standard multiple regression analysis was used to determine if this hypothesis predicted unique variance in eating for physical rather than emotional reasons. This analysis showed that being around people who are consumed with dieting and being thin and the overall focus on food and weight by people in an individual's environment accounted for 21.6% of the variance in eating for physical rather than emotional reasons (F [2, 256] = 6.29, $p < .05$). However, of the two individuals predictors, only being around people who are consumed with dieting and being thin predicted unique variance in eating for physical rather than emotional reasons (β = -.21, t [258] = -2.41, $p < .05$). Contrary to the hypothesis, overall focus of food and weight by people in an individual's

environment did not predict unique variance in eating for physical rather than emotional reasons (β = -.01, t [258] = -.15, *ns*).

A final standard multiple regression analysis was used to determine if this hypothesis predicted unique variance in reliance on internal hunger and satiety cues to govern eating. This analysis showed that being around people who are consumed with dieting and being thin and the overall focus on food and weight by people in an individual's environment accounted for 22.2% of the variance in reliance on internal hunger and satiety cues to govern eating (F [2, 256] = 6.66, $p < .05$). Of the two individual factors, neither being around people who are consumed with dieting and being thin (β = -.12, t [258] = -1.43, *ns*) nor overall focus of food and weight by people in an individual's environment (β = -.12, t [258] = -1.38, *ns*) predicted unique variance in reliance on internal hunger and satiety cues to govern eating. Results from these analyses are located in Table 4.

Maladaptive Personality Characteristics

Standard multiple regression analyses were ran to assess if the hypothesis that certain maladaptive personality characteristics would be associated with low levels of intuitive eating predicted unique variance in intuitive eating. The maladaptive personality characteristics were put into the following groups: (1) depression, negative affect, and maladaptive perfectionism, (2) body appreciation and body dissatisfaction, and (3) low levels of self-esteem and optimism. Each group was assessed in its own multiple regression analysis with intuitive eating and its respective constructs.

First, depression, negative affect, and maladaptive perfectionism were assessed to determine if they predicted unique variance in intuitive eating. This analysis showed

these three personality characteristics accounted for 43.9% of the variance in intuitive eating (F [3, 255] = 20.35, $p < .05$). Of the three individual characteristics, only depression (β = -.25, t [258] = -3.12, $p < .05$) and maladaptive perfectionism (β = -.20, t [258] = -2.79, $p < .05$) predicted unique variance in intuitive eating. Negative affect did not predict unique variance in intuitive eating as expected (β = -.06, t [258] = -.79, *ns*).

Depression, negative affect, and maladaptive perfectionism were also assessed to determine if they predicted unique variance in unconditional permission to eat. This analysis showed that these three personality characteristics accounted for 33.8% of the variance in unconditional permission to eat (F [3, 255] = 10.97, $p < .05$). Of the three individual characteristics, only depression (β = -.17, t [258] = -2.05, $p < .05$) and maladaptive perfectionism (β = -.24, t [258] = -3.18, $p < .05$) predicted unique variance in unconditional permission to eat. Negative affect did not predict unique variance in unconditional permission to eat as expected (β = .04, t [258] = .48, *ns*).

Depression, negative affect, and maladaptive perfectionism were also assessed to determine if they predicted unique variance in eating for physical rather than emotional reasons. This analysis showed that these three personality characteristics accounted for 37.3% of the variance in eating for physical rather than emotional reasons (F [3, 255] = 13.74, $p < .05$). Of the three individual characteristics, only depression predicted unique variance in eating for physical rather than emotional reasons (β = -.22, t [258] = -2.65, $p < .05$). Negative affect (β = -.10, t [258] = -1.29, *ns*) and maladaptive perfectionism (β = -.11, t [258] = -1.52, *ns*) did not predicted unique variance in eating for physical rather than emotional reasons.

Depression, negative affect, and maladaptive perfectionism were also assessed to determine if they predicted unique variance in reliance on internal hunger and satiety cues to govern eating. This analysis showed that these three personality characteristics accounted for 26.2% of the variance in reliance on internal hunger and satiety cues to govern eating (F [3, 255] = 6.29, $p < .05$). None of the three personality characteristics: depression (β = -.15, t [258] = -1.79, *ns*), negative affect (β = -.14, t [258] = -1.71, *ns*), or maladaptive perfectionism (β = .01, t [258] = .11, *ns*) predicted unique variance in reliance on internal hunger and satiety cues to govern eating as hypothesized.

Second, body appreciation and body dissatisfaction were assessed to determine if they predicted unique variance in intuitive eating. This analysis showed that these personality characteristic accounted for 58.6% of the variance in intuitive eating (F [3, 255] = 67.09, $p < .05$). Both of these individuals characteristics, body appreciation (β = .26, t [258] = 3.71, $p < .05$) and body dissatisfaction (β = -.38, t [258] = -5.39, $p < .05$) predicted unique variance in intuitive eating as predicted.

Body appreciation and body dissatisfaction were also assessed to determine if they predicted unique variance in unconditional permission to eat. This analysis showed that these personality characteristic accounted for 39.7% of the variance in unconditional permission to eat (F [3, 255] = 23.89, $p < .05$). Of these two individual personality characteristics, only body dissatisfaction predicted unique variance in unconditional permission to eat (β = -.29, t [258] = -3.64, $p < .05$). Body appreciation did not predict unique variance in unconditional permission to eat (β = .14, t [258] = 1.75, *ns*).

Body appreciation and body dissatisfaction were also assessed to determine if they predicted unique variance in eating for physical rather than emotional reasons. This

analysis showed that these personality characteristic accounted for 49.5% of the variance in eating for physical rather than emotional reasons (F [3, 255] = 41.46, $p < .05$). Both of these individuals characteristics, body appreciation ($\beta = .18$, t [258] = 2.34, $p < .05$) and body dissatisfaction ($\beta = -.36$, t [258] = -4.76, $p < .05$) predicted unique variance in eating for physical rather than emotional reasons as hypothesized.

Body appreciation and body dissatisfaction were also assessed to determine if they predicted unique variance in reliance on internal hunger and satiety cues to govern eating. This analysis showed that these personality characteristic accounted for 42.8% of the variance in reliance on internal hunger and satiety cues to govern eating (F [3, 255] = 28.77, $p < .05$). Of these two individual personality characteristics, only body appreciation predicted unique variance in reliance on internal hunger and satiety cues to govern eating ($\beta = .34$, t [258] = 4.36, $p < .05$). Body dissatisfaction did not predict unique variance in reliance on internal hunger and satiety cues to govern eating ($\beta = -.12$, t [258] = -1.50, *ns*).

Finally, self-esteem and optimism were examined to determine if they predicted unique variance in intuitive eating. This analysis showed that these personality characteristic accounted for 40.9% of the variance in reliance intuitive eating (F [3, 255] = 25.78, $p < .05$). Of these two individual personality characteristics, only self esteem predicted unique variance in intuitive eating ($\beta = .42$, t [258] = 5.44, $p < .05$). Optimism did not predict unique variance in intuitive eating ($\beta = -.01$, t [258] = -.18, *ns*).

Self-esteem and optimism were also examined to determine if they predicted unique variance in unconditional permission to eat. This analysis showed that these personality characteristic accounted for 28.2% of the variance in unconditional

permission to eat (F [3, 255] = 11.02, $p < .05$). Of these two individual personality characteristics, only self esteem predicted unique variance in unconditional permission to eat ($\beta = .29$, t [258] = 3.53, $p < .05$). Optimism did not predict unique variance in unconditional permission to eat ($\beta = -.01$, t [258] = -.08, *ns*).

Self-esteem and optimism were also examined to determine if they predicted unique variance in eating for physical rather than emotional reasons. This analysis showed that these personality characteristic accounted for 33.0% of the variance in eating for physical rather than emotional reasons (F [3, 255] = 15.64, $p < .05$). Of these two individual personality characteristics, only self esteem predicted unique variance in eating for physical rather than emotional reasons ($\beta = .37$, t [258] = 4.65, $p < .05$). Optimism did not predict unique variance in eating for physical rather than emotional reasons ($\beta = -.07$, t [258] = -.81, *ns*).

Self-esteem and optimism were also examined to determine if they predicted unique variance in reliance on internal hunger and satiety cues to govern eating. This analysis showed that these personality characteristic accounted for 30.9% of the variance in reliance on internal hunger and satiety cues to govern eating (F [3, 255] = 13.56, $p < .05$). Of these two individual personality characteristics, only self esteem predicted unique variance in reliance on internal hunger and satiety cues to govern eating ($\beta = .26$, t [258] = 3.19, $p < .05$). Optimism did not predict unique variance in reliance on internal hunger and satiety cues to govern eating ($\beta = .07$, t [258] = .91, *ns*). Table 5 contains the results of all of these analyses.

Sociocultural Pressures

The hypothesis that suggests that internalization of sociocultural pressures to be thin will be associated with lower levels of intuitive eating was assessed using a standard multiple regression analysis to determine if unique variance in intuitive eating was predicted. This analysis showed that internalization of media messages, perceived sociocultural pressures for thinness, and body acceptance by others accounted for 56.0% of the variance in intuitive eating (F [3, 255] = 38.88, $p < .05$). All three individual factors: internalization of media messages (β = -.24, t [258] = -4.04, $p < .05$), perceived sociocultural pressures for thinness (β = -.20, t [258] = -2.82, $p < .05$), and body acceptance by others (β = .25, t [258] = 3.77, $p < .05$) predicted unique variance in intuitive eating as expected.

A second standard multiple regression analysis was used to determine if this hypothesis predicted unique variance in unconditional permission to eat. This analysis showed that internalization of media messages, perceived sociocultural pressures for thinness, and body acceptance by others accounted for 45.4% of the variance in unconditional permission to eat (F [3, 255] = 22.08, $p < .05$). Of the individual predictors, only being internalization of media messages (β = -.21, t [258] = -3.22, $p < .05$), and perceived sociocultural pressures for thinness (β = -.27, t [258] = -3.44, $p < .05$) predicted unique variance in unconditional permission to eat. Contrary to the hypothesis, body acceptance by others did not predict unique variance in unconditional permission to eat (β = -.07, t [258] = .97, *ns*).

A third standard multiple regression analysis was used to determine if this hypothesis predicted unique variance in eating for physical rather than emotional reasons. This analysis showed that internalization of media messages, perceived sociocultural

pressures for thinness, and body acceptance by others accounted for 41.2% of the variance in eating for physical rather than emotional reasons (F [3, 255] = 17.43, $p < .05$). Of all the individual factors, only body acceptance by others predicted unique variance in eating for physical rather than emotional reasons ($\beta = .27$, t [258] = 3.74, $p < .05$) as predicted. Contrary to the hypothesis, neither internalization of media messages ($\beta = -.12$, t [258] = 1.84, *ns*) nor perceived sociocultural pressures for thinness ($\beta = -.10$, t [258] = -1.29, *ns*) predicted unique variance in eating for physical rather than emotional reasons.

A final standard multiple regression analysis was used to determine if this hypothesis predicted unique variance in reliance on internal hunger and satiety cues to govern eating. This analysis showed that internalization of media messages, perceived sociocultural pressures for thinness, and body acceptance by others accounted for 38.7% of the variance in reliance on internal hunger and satiety cues to govern eating (F [3, 255] = 14.95, $p < .05$). Two of the individual factors: internalization of media messages ($\beta = -.21$, t [258] = -3.09, $p < .05$), and body acceptance by others ($\beta = .30$, t [258] = 4.10, $p < .05$) predicted unique variance in reliance on internal hunger and satiety cues to govern eating as predicted. Contrary to the hypothesis, perceived sociocultural pressures for thinness did not predict unique variance in reliance on internal hunger and satiety cues to govern eating ($\beta = .06$, t [258] = .80, *ns*). Results of these analyses are found in Table 6.

Discussion

Several different areas of intuitive eating were examined for the present study: (1) gender differences in intuitive eating, (2) participants' ideas of what constitutes an adaptive diet, (3) the relationship between caregiver eating messages and behaviors and

intuitive eating, (4) the association between dieting and weight preoccupation in participants' environments and intuitive eating, (5) the association between certain personality characteristics and intuitive eating, and (6) the association between societal/media messages and intuitive eating. All hypotheses were supported, at least in part, by the data.

First, men were found to have higher levels of intuitive eating and eating for physical rather than emotional reasons than women. This is similar to previous research indicating that men have lower levels of disordered eating than women (Meyer & Waller, 1998; Murnen & Smolak, 1997; Tata et al., 2001; Walcott et al., 2003). Yet, it is important to not assume that low levels of intuitive eating are equivalent to high levels of eating disorder symptomatology, as these constructs are related but not completely overlapping (Tylka & Wilcox, 2006). It is essential to note that even though the number of female participants (n = 178) was much larger than the number of male participants (n = 80) in this survey, the t-test was ran assuming equal variance between the genders.

Second, the idea that individuals have a skewed idea of adaptive eating was moderately supported by the data. Knowledge of an adaptive diet or healthy eating (i.e., defined in this study as one that does not avoid certain categories of food, such as the avoidance of all sugar or fatty foods, which does not create feelings of deprivation, food preoccupation or disinhibited eating) was correlated with higher levels of intuitive eating and unconditional permission to eat. This fact suggests that as the knowledge and practice of an adaptive diet decreases, so do levels of intuitive eating and vice versa. This idea supports the theory that intuitive eating and its constructs represent healthy, adaptive eating (Tribole & Resch, 2003).

Third, increased levels of perceived caregiver use of coercive feeding strategies (e.g., pressures to eat certain foods such as fruits and vegetables, restriction of sugar or fatty foods) were associated with lower levels of intuitive eating and unconditional permission to eat. Participants' perceptions that their caregivers used coercive feeding strategies also negatively predicted unique variance in intuitive eating and its respective constructs. The overall focus on food and weight by caregivers also negatively predicted unique variance in intuitive eating and unconditional permission to eat. This data expands on previous research indicating that caregiver messages have a large impact on childhood eating behaviors by determining that these caregiver messages are directly related to intuitive eating, such that these messages are associated with lower levels of intuitive eating (Birch, 1999; Birch & Fisher, 2000; Fisher & Birch, 1999).

Fourth, as predicted, being around people who are consumed with dieting and being thin was correlated with lower levels of intuitive eating and all three of its constructs. Being around people who are consumed with dieting and being thin also negatively predicted unique variance in intuitive eating, unconditional permission to eat, and eating for physical rather than emotional reasons. The overall focus on food and weight by people in an individual's environment negatively predicted unique variance in unconditional permission to eat. This indicates that being around people who are consumed with dieting and being thin not only increases levels of chronic dieting and eating disorder symptomatology, it is also negatively associated with lower levels of intuitive eating (Edmunds & Hill, 1999; Keel et al., 1997; Smolak et al., 1999).

Fifth, all of the maladaptive personality characteristics tested in this study (negative affect and depression, body dissatisfaction, low levels of body appreciation,

maladaptive perfectionism, low levels of self-esteem, and low levels optimism) were associated with lower levels of intuitive eating. Depression, maladaptive perfectionism, body dissatisfaction, low levels of body appreciation, low levels of self-esteem and low levels of optimism all also predicted unique variance in intuitive eating. While negative affect and optimism were correlated bivariately in the expected directions with intuitive eating, they did not predict unique variance when other variables were considered. This supports and expands on previous research by Tylka (2006) indicating that certain personality characteristics have a negative influence on levels of intuitive eating, but should be examined concurrently with other variables to determine which have the stronger and unique associations with intuitive eating.

Finally, internalization of sociocultural pressures to be thin was associated with lower levels of intuitive eating. Internalization of media messages, perceived sociocultural pressures to be thin, and body acceptance by others all negatively predicted unique variance in intuitive eating. This suggests that internalization of the media's focus on thinness and weight are associated with lower levels of intuitive eating as well as eating disorder symptomatology, depression, and higher levels of body dissatisfaction in women and men as previously mentioned (Agliata & Tantleff-Dunn, 2004; Fredrickson & Roberts, 1997; Stice et al., 1996).

Implications for Theory

Many of the relationships between the factors assessed in this study and intuitive eating have not been previously researched (i.e. gender, caregiver eating messages, perceptions of adaptive eating, being around others who are consumed with dieting and being thin, and certain maladaptive personality characteristics) and therefore add

incrementally to research on eating behaviors. The findings of this study indicate that each of these factors have a negative association with intuitive eating and thus should be incorporated into current theories on eating behaviors and intuitive eating. The incorporation of these findings into current theories could essentially provide valuable information to help discover reasons for low levels of intuitive eating.

Implications for Research

Future research could re-assess the hypothesis predicting that men have higher levels of intuitive eating than women. It is possible that significant gender differences in the intuitive eating constructs of unconditional permission to eat and reliance on internal hunger and satiety cues to govern eating could be found with a larger number of men, or perhaps there genuinely is no significant difference between women and men in these areas. Also, the majority of participants in this study were young, Caucasian women, so future research could examine ethnic, and age differences in levels of intuitive eating as well. Studies have shown some ethnical differences in disordered eating, but to my knowledge, no studied have examined the relationship between ethnicity and levels of intuitive eating (i.e. Barry & Grilo, 2002; Franko, 2007; Wildes, Emery, & Simons, 2001). This would improve the basic understanding of intuitive eating as well as prevent generalizations of previous findings to individuals of different ages and ethnicities.

Future research could also focus on factors that positively influence intuitive eating. Avalos and Tylka (2006) have previously found that body function and positive body image influence intuitive eating levels in a positive direction in college women, but there are many other factors, such as personality variables, that could increase or decrease levels of intuitive eating as well. These factors should also be examined with minority

individuals and men. Discovering these factors could impact our knowledge of factors that contribute to intuitive eating so as to facilitate attempts to increase this adaptive eating style.

Implications for Practice

The data analyzed in this study indicated that individuals have skewed perceptions of what is included in an adaptive diet, believing that restricting certain foods is healthy and adaptive when research shows that it is clearly not (Birch, 1999; Birch & Fisher, 2000; Cutting et al., 1999; Fisher & Birch, 1999). These ideas suggest that individuals need to be educated on intuitive eating and its constructs in order to increase knowledge of adaptive diets. Spreading this information could increase levels of intuitive eating and decrease levels of chronic dieting and disordered eating.

The information from this study also indicated that perceptions that caregiver used coercive feeding strategies negatively influenced intuitive eating. Educating parents and caregivers on coercive feeding strategies as well as the negative effects of the use of these feeding strategies could decrease their likelihood to use them. This would then decrease the negative effects that these feeding strategies have on children (i.e. low self-esteem, negative body image, low levels of intuitive eating). It would also be beneficial to educate parents on intuitive eating to increase their levels of intuitive eating so that they can display healthy eating behaviors to their children.

Certain maladaptive personality characteristics were also found to be associated with low levels of intuitive eating. Teaching individuals how to identify these maladaptive personality characteristics within themselves, as well as how to replace them with more adaptive characteristics (i.e. self-esteem, optimism, body appreciation) could

help raise intuitive eating levels. Not only would replacing maladaptive personality characteristics with adaptive personality characteristics increase levels of intuitive eating, it could increase overall physical and psychological well-being (Tylka & Wilcox, 2006).

Limitations

Limitations of the present study should be addressed. First, participants of the present study were primarily young, middle class, Caucasian college women, which preclude the generalization of the findings to other groups such as women of color, individuals of various socioeconomic status, community women, and older women. Second, the variable relations between the constructs in the present study were not analyzed using SEM, which is an essential next step in understanding the theoretical framework developed in the present study. This analysis would require at least 300 participants, depending on the number of indicators used to represent each latent variable. Third, the present study used a correlational design, and nothing can be said about the direction of the predictions made. Fourth, the self-report mode of data collection is susceptible to erroneous responding. Finally, Cronbach's coefficient alpha for the Intuitive Eating subscale of Reliance on Internal Hunger and Satiety cues to govern eating was reported at 0.67 for this study. Unfortunately, this coefficient is slightly lower than acceptable Cronbach's alphas of 0.70 or higher. This reported alpha suggests a lower level of internal consistency reliability for this measure in this study.

Conclusion

This study provided new information and expanded on previous research in gender differences and negatively influencing factors of intuitive eating. The present study provided evidence that men have higher levels of intuitive eating then women.

This study also discovered support for many factors that negatively influence levels of intuitive eating, which may be the closest thing to healthy eating. Specifically, individuals who internalize sociocultural pressures to be thin, and/or have an environment containing diet and weight preoccupied individuals are predicted to have lower levels of intuitive eating. Also, children who perceived being exposed to coercive feeding strategies by their caregivers had lower levels of intuitive eating and carried negative eating habits into adulthood. It was also discovered that personality characteristics of negative affect and depression, body dissatisfaction, low levels of body appreciation maladaptive perfectionism, low levels of self-esteem, and low levels of optimism predicted low levels of intuitive eating. Identifying that all of these factors are associated with lower levels of intuitive eating is an important step in the process of improving one's ability to eat intuitively.

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Table 1: *Means, Standard Deviations, and Correlations among the Measures (N = 259)*

Measures	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1. BDI	-----																		
2. PANAS-positive	-.51*	-----																	
3. PANAS-negative	.66*	-.47*	-----																
4. DOS	.35*	-.17*	.28*	-----															
5. BAS	-.58*	.50*	-.47*	-.40*	-----														
6. APS-maladaptive	.57*	-.49*	.52*	.27*	-.38*	-----													
7. APS-adaptive	-.07	.28*	-.18*	.04	.11	-.11	-----												
8. PSP	.49*	-.30*	.38*	.47*	.58*	.31*	-.08	-----											
9. BAOS	-.44*	.41*	-.36*	-.28*	.62*	-.31*	.20*	-.62*	-----										
10. CEMS	.36*	-.03	.37*	.36*	-.25*	.26*	-.06	.45*	-.41*	-----									
11. HES	-.14*	.12*	-.10	-.18*	.30*	-.09	-.04	-.29*	.17*	-.09	-----								
12. RSE	-.57*	64*	-.55*	-.24*	.62*	-.60*	.28*	-.40*	.48*	-.17*	.09	-----							
13. SATAQ	.31*	-.32*	.31*	.36*	-.54*	.35*	-.02	.48*	-.38*	.20*	-.24*	-.45*	-----						
14. BD EDI-2	.39*	-.42*	.34*	.30*	-.69*	.35*	-.02	.59*	-.57*	.22*	-.27*	-.46*	.55*	-----					
15. LOT-R	-.59*	.57*	-.62*	-.19*	.44*	-.56*	.21*	-.25*	.32*	-.15*	.09	.67*	-.28*	-.31*	-----				
16. IES	-.40*	.29*	-.33*	-.42*	.52*	-.37*	.07	-.47*	.47*	-.37*	.30*	.41*	-.43*	-.56*	.27*	-----			
17. IES-UPE	-.28*	.15*	-.20*	-.42*	.34*	-.31*	-.06	-.41*	.31*	-.28*	.39*	.28*	-.36*	-.38*	.19*	.81*	-----		
18. IES-EPR	-.35*	.28*	-.30*	-.22*	.42*	-.29*	.13*	-.33*	.38*	-.28*	.04	.33*	-.27*	-.48*	.18*	.69*	.21*	-----	
19. IES-RIHSC	-.24*	.27*	-.24*	-.21*	.42*	-.15*	.18*	-.23*	.34*	-.26*	.12	.31*	-.29*	-.35*	.25*	.63*	.30*	.39*	-----
M	.43	3.60	2.28	2.99	3.49	3.39	5.53	2.15	3.70	2.96	2.48	3.15	2.73	3.40	2.80	3.38	3.27	3.28	3.67
SD	.39	.65	.81	.71	.76	1.34	.99	.82	.77	.45	.64	.52	.89	1.14	.55	.52	.77	.83	.49

Note. BDI = Beck Depression Inventory, PANAS-positive = Positive Affect subscale of Positive and Negative Affect Scale, PANAS-negative = Negative Affect subscale of Positive and Negative Affect Scale, DOS = Dieting Others Scale, BAS = Body Appreciation Scale, APS-maladaptive = Maladaptive Perfectionism subscale of Almost Perfect Scale, APS-adaptive = Adaptive Perfectionism subscale of Almost Perfect Scale, PSP = Perceived Sociocultural Pressures Scale, BAOS = Body Acceptance by Others Scale, CEMS = Caregiver Eating Messages Scale, HES = Healthy Eating Scale, RSE = Rosenberg Self-Esteem Scale, SATAQ = Internalization subscale of Sociocultural Attitudes Towards Appearance Questionnaire, BD EDI-2 = Body Dissatisfaction subscale of Eating Disorder Inventory-2, LOT-R = Life Orientation Test-Revised, IES = Intuitive Eating Scale, IES-UPE = Unconditional Permission to Eat subscale of Intuitive Eating Scale, IES-EPR = Eating for Physical Reasons subscale of Intuitive Eating Scale, IES-RIHSC = Reliance on Internal Hunger and Satiety Cues subscale of Intuitive Eating Scale.

*$p < .05$

Table 2

Independent T-test Predicting Gender Differences in Levels of Intuitive Eating (N = 258)

Gender	*M*	*SD*
1. Female	3.33	.52
2. Male	3.50	.51
Overall *t* [2, 256] = -2.42*		
Dependent Variable = Intuitive Eating Scale (IES)		
Gender	*M*	*SD*
1. Female	3.22	.77
2. Male	3.39	.78
Overall *t* [2, 256] = -1.68		
Dependent Variable = Unconditional Permission to Eat Subscale (IES-UPE)		
Gender	*M*	*SD*
1. Female	3.19	.82
2. Male	3.46	.83
Overall *t* [2, 256] = -2.41*		
Dependent Variable = Eating for Physical Reasons Subscale (IES-EPR)		
Gender	*M*	*SD*
1. Female	3.65	.49
2. Male	3.71	.48
Overall *t* [2, 256] = -.93		
Dependent Variable = Reliance on Internal Hunger and Satiety Cues Subscale (IES-RIHSC)		

Note. *$p < .05$

Table 3
Standard Multiple Regression Analyses: Caregiver Eating Messages Predicting Intuitive Eating

Predictor	*β*	*t* [253]
1. Caregiver use of coercive feeding strategies (CEMS)	-.32	-4.95*
2. Overall focus on food and weight by caregivers (CEMS-22)	-.14	-2.22*
Overall *F* [2, 251] = 23.36*		
Dependent Variable = Intuitive Eating Scale (IES)		
Predictor	*β*	*t* [253]
1. Caregiver use of coercive feeding strategies (CEMS)	-.18	-2.80*
2. Overall focus on food and weight by caregivers (CEMS-22)	-.24	-3.77*
Overall *F* [2, 251] = 18.64*		
Dependent Variable = Unconditional Permission to Eat Subscale (IES-UPE)		
Predictor	*β*	*t* [253]
1. Caregiver use of coercive feeding strategies (CEMS)	-.31	-4.65*
2. Overall focus on food and weight by caregivers (CEMS-22)	.06	.91
Overall *F* [2, 251] = 11.45*		
Dependent Variable = Eating for Physical Reasons Subscale (IES-EPR)		
Predictor	*β*	*t* [253]
1. Caregiver use of coercive feeding strategies (CEMS)	-.23	-3.38*
2. Overall focus on food and weight by caregivers (CEMS-22)	-.06	-.85
Overall *F* [2, 251] = 8.79*		
Dependent Variable = Reliance on Internal Hunger and Satiety Cues Subscale (IES-RIHSC)		

Note. *$p < .05$

Table 4
Standard Multiple Regression Analyses: Dieting Others Predicting Intuitive Eating

Predictor	*β*	*t* [258]
1. Being around people who are consumed with dieting and being thin (DOS)	-.33	-4.10*
2. Overall focus on food and weight by people in an individual's environment (PE)	-.14	-1.74
Overall *F* [2, 256] = 29.71*		
Dependent Variable = Intuitive Eating Scale (IES)		

Predictor	*β*	*t* [258]
1. Being around people who are consumed with dieting and being thin (DOS)	-.31	-3.95*
2. Overall focus on food and weight by people in an individual's environment (PE)	-.16	-2.00*
Overall *F* [2, 256] = 30.51*		
Dependent Variable = Unconditional Permission to Eat Subscale (IES-UPE)		

Predictor	*β*	*t* [258]
1. Being around people who are consumed with dieting and being thin (DOS)	-.21	-2.41*
2. Overall focus on food and weight by people in an individual's environment (PE)	-.01	-.15
Overall *F* [2, 256] = 6.29*		
Dependent Variable = Eating for Physical Reasons Subscale (IES-EPR)		

Predictor	*β*	*t* [258]
1. Being around people who are consumed with dieting and being thin (DOS)	-.12	-1.43
2. Overall focus on food and weight by people in an individual's environment (PE)	-.12	-1.38
Overall *F* [2, 256] = 6.66*		
Dependent Variable = Reliance on Internal Hunger and Satiety Cues Subscale (IES-RIHSC)		

Note. *$p < .05$

Table 5
Standard Multiple Regression Analyses: Maladaptive Personality Characteristics Predicting Intuitive Eating

Predictor	*β*	*t* [258]
1. Depression (BDI)	-.25	-3.12*
2. Negative Affect (PANAS-negative)	-.06	-.79
3. Maladaptive Perfectionism (APS-maladaptive)	-.20	-2.79*
Overall *F* [3, 255] = 20.35*		
Dependent Variable = Intuitive Eating Scale (IES)		

Predictor	*β*	*t* [258]
1. Depression (BDI)	-.17	-2.05*
2. Negative Affect (PANAS-negative)	.04	.48
3. Maladaptive Perfectionism (APS-maladaptive)	-.24	-3.18*
Overall *F* [3, 255] = 10.97*		
Dependent Variable = Unconditional Permission to Eat Subscale (IES-UPE)		

Predictor	*β*	*t* [258]
1. Depression (BDI)	-.22	-2.65*
2. Negative Affect (PANAS-negative)	-.10	-1.29
3. Maladaptive Perfectionism (APS-maladaptive)	-.11	-1.52
Overall *F* [3, 255] = 13.74*		
Dependent Variable = Eating for Physical Reasons Subscale (IES-EPR)		

Predictor	*β*	*t* [258]
1. Depression (BDI)	-.15	-1.79
2. Negative Affect (PANAS-negative)	-.14	-1.71
3. Maladaptive Perfectionism (APS-maladaptive)	.01	.11
Overall *F* [3, 255] = 6.29*		
Dependent Variable = Reliance on Internal Hunger and Satiety Cues Subscale (IES-RIHSC)		

Note *$p < .05$

Table 5 (cont.)

Predictor	*β*	*t* [258]
1. Body Appreciation (BAS)	.26	3.71*
2. Body Dissatisfaction (BD EDI-2)	-.38	-5.39*
Overall *F* [2, 256] = 67.09*		
Dependent Variable = Intuitive Eating Scale (IES)		

Predictor	*β*	*t* [258]
1. Body Appreciation (BAS)	.14	1.75
2. Body Dissatisfaction (BD EDI-2)	-.29	-3.64*
Overall *F* [2, 256] = 23.89*		
Dependent Variable = Unconditional Permission to Eat Subscale (IES-UPE)		

Predictor	*β*	*t* [258]
1. Body Appreciation (BAS)	.18	2.34*
2. Body Dissatisfaction (BD EDI-2)	-.36	-4.76*
Overall *F* [2, 256] = 41.46*		
Dependent Variable = Eating for Physical Reasons Subscale (IES-EPR)		

Predictor	*β*	*t* [258]
1. Body Appreciation (BAS)	.34	4.36*
2. Body Dissatisfaction (BD EDI-2)	-.12	-1.50
Overall *F* [2, 256] = 28.77*		
Dependent Variable = Reliance on Internal Hunger and Satiety Cues Subscale (IES-RIHSC)		

Note. *$p < .05$

Table 5 (cont.)

Predictor	β	t [258]
1. Self-Esteem (RSE)	.42	5.44*
2. Optimism (LOT-R)	-.01	-.18
Overall F [2, 256] = 25.78*		
Dependent Variable = Intuitive Eating Scale (IES)		
Predictor	β	t [258]
1. Self-Esteem (RSE)	.29	3.53*
2. Optimism (LOT-R)	-.01	-.08
Overall F [2, 256] = 11.02*		
Dependent Variable = Unconditional Permission to Eat Subscale (IES-UPE)		
Predictor	β	t [258]
1. Self-Esteem (RSE)	.37	4.65*
2. Optimism (LOT-R)	-.07	-.81
Overall F [2, 256] = 15.64*		
Dependent Variable = Eating for Physical Reasons Subscale (IES-EPR)		
Predictor	β	t [258]
1. Self-Esteem (RSE)	.26	3.19*
2. Optimism (LOT-R)	.07	.91
Overall F [2, 256] = 13.56*		
Dependent Variable = Reliance on Internal Hunger and Satiety Cues Subscale (IES-RIHSC)		

Note. *$p < .05$

Table 6
Standard Multiple Regression Analyses: Sociocultural Pressures for Thinness Predicting Intuitive Eating

Predictor	*β*	*t* [258]
1. Internalization of media messages (SATAQ)	-.24	-4.04*
2. Perceived sociocultural pressures For thinness (PSP)	-.20	-2.82*
3. Body acceptance by others (BAOS)	.25	3.77*
Overall *F* [3, 255] = 38.88*		
Dependent Variable = Intuitive Eating Scale (IES)		

Predictor	*β*	*t* [258]
1. Internalization of media messages (SATAQ)	-.21	-3.22*
2. Perceived sociocultural pressures For thinness (PSP)	-.27	-3.54*
3. Body acceptance by others (BAOS)	.07	.97
Overall *F* [3, 255] = 22.08*		
Dependent Variable = Unconditional Permission to Eat Subscale (IES-UPE)		

Predictor	*β*	*t* [258]
1. Internalization of media messages (SATAQ)	-.12	-1.84
2. Perceived sociocultural pressures For thinness (PSP)	-.10	-1.29
3. Body acceptance by others (BAOS)	.27	3.74*
Overall *F* [3, 255] = 17.43*		
Dependent Variable = Eating for Physical Reasons Subscale (IES-EPR)		

Predictor	*β*	*t* [258]
1. Internalization of media messages (SATAQ)	-.21	-3.09*
2. Perceived sociocultural pressures For thinness (PSP)	.06	.80
3. Body acceptance by others (BAOS)	.30	4.10*
Overall *F* [3, 255] = 14.95*		
Dependent Variable = Reliance on Internal Hunger and Satiety Cues Subscale (IES-RIHSC)		

Note. *$p < .05$

APPENDIX A

DEMOGRAPHIC DATA FORM

Age: _____

Gender: _____ Female _____ Male

Ethnic Identification

_____ African American _____ Asian American
_____ Caucasian/White _____ Native American
_____ Latino
_____ Other: please specify: _____

Relationship status:

_____ Single _____ Married
_____ Long term relationship _____ Divorced
_____Other: please specify: _____

Year in School:

_____ Freshman-or- high school senior _____ Post-bac
_____ Sophomore _____ Graduate student
_____ Junior _____ Other
_____ Senior

Socio-Economic Identification

_____ Upper class _____ Middle class
_____ Upper-middle class _____ Working class

What is your height? _____ What is your weight? _____

APPENDIX B

INTUITIVE EATING SCALE

Directions for participants: For each item, please circle the answer that best characterizes your attitudes or behaviors.

1. **I try to avoid certain foods high in fat, carbohydrates, or calories.**

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

2. **I stop eating when I feel full (not overstuffed).**

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

3. **I find myself eating when I'm feeling emotional (e.g., anxious, depressed, sad), even when I'm not physically hungry.**

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

4. **If I am craving a certain food, I allow myself to have it.**

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

5. **I follow eating rules or dieting plans that dictate what, when, and/or how much to eat.**

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

6. **I find myself eating when I am bored, even when I'm not physically hungry.**

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

7. **I can tell when I'm slightly full.**

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

8. **I can tell when I'm slightly hungry.**

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

9. **I get mad at myself for eating something unhealthy.**

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

10. **I find myself eating when I am lonely, even when I'm not physically hungry.**

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

11. **I trust my body to tell me when to eat.**

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

12. **I trust my body to tell me what to eat.**

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

13. **I trust my body to tell me how much to eat.**

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

14. **I have forbidden foods that I don't allow myself to eat.**

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

15. **When I'm eating, I can tell when I am getting full.**

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

16. **I use food to help me soothe my negative emotions.**

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

17. **I find myself eating when I am stressed out, even when I'm not physically hungry.**

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

18. **I feel guilty if I eat a certain food that is high in calories, fat, or carbohydrates.**

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

19. **I think of a certain food as "good" or "bad" depending on its nutritional content.**

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

20. **I don't trust myself around fattening foods.**

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

21. **I don't keep certain foods in my house/apartment because I think that I may lose control and eat them.**

1	2	3	4	5

Strongly Disagree Disagree Neutral Agree Strongly Agree

APPENDIX C

CAREGIVER EATING MESSAGES SCALE

Directions for participants: For each item, please indicate the degree to which your parents/caregivers emphasized the following behaviors while you were growing up.

1. **Told you to eat all the food on your plate.**

1	2	3	4	5	6
Always	Usually	Often	Sometimes	Rarely	Never

2. **Made sure you finished all the food that was on your plate.**

1	2	3	4	5	6
Always	Usually	Often	Sometimes	Rarely	Never

3. **Made you eat at times you weren't hungry.**

1	2	3	4	5	6
Always	Usually	Often	Sometimes	Rarely	Never

4. **Told you not to eat something that wasn't healthy.**

1	2	3	4	5	6
Always	Usually	Often	Sometimes	Rarely	Never

5. **Told you to eat all your vegetables after you told them that you didn't want to eat any more.**

1	2	3	4	5	6
Always	Usually	Often	Sometimes	Rarely	Never

6. **Looked at you with raised eyebrows at how much you were eating, making you feel that you were eating too much.**

1	2	3	4	5	6
Always	Usually	Often	Sometimes	Rarely	Never

7. **Commented that you weren't eating enough.**

1	2	3	4	5	6
Always	Usually	Often	Sometimes	Rarely	Never

8. **Commented that you were eating too much.**

1	2	3	4	5	6
Always	Usually	Often	Sometimes	Rarely	Never

9. **Made fun of you for eating too much.**

1	2	3	4	5	6
Always	Usually	Often	Sometimes	Rarely	Never

10. **Made fun of you for eating too little.**

1	2	3	4	5	6
Always	Usually	Often	Sometimes	Rarely	Never

11. **Told you that you couldn't eat at times you were really hungry.**

1	2	3	4	5	6
Always	Usually	Often	Sometimes	Rarely	Never

12. Told you that you shouldn't eat certain foods because they will "make you fat."

1	2	3	4	5	6
Always	Usually	Often	Sometimes	Rarely	Never

13. Ate at a specific time each day.

1	2	3	4	5	6
Always	Usually	Often	Sometimes	Rarely	Never

14. Made you eat despite the fact that you were full.

1	2	3	4	5	6
Always	Usually	Often	Sometimes	Rarely	Never

15. Put more food on your plate even though you said that you were full.

1	2	3	4	5	6
Always	Usually	Often	Sometimes	Rarely	Never

16. Used food to reward you for good behavior.

1	2	3	4	5	6
Always	Usually	Often	Sometimes	Rarely	Never

17. Restricted food to punish you for bad behavior.

1	2	3	4	5	6
Always	Usually	Often	Sometimes	Rarely	Never

18. Talked about their weight.

1	2	3	4	5	6
Always	Usually	Often	Sometimes	Rarely	Never

19. Talked about dieting or restricting certain high calorie foods.

1	2	3	4	5	6
Always	Usually	Often	Sometimes	Rarely	Never

20. I've felt acceptance from my family regarding my body shape and/or weight.

1	2	3	4	5
Never	Rarely	Sometimes	Often	Always

21. My family has sent me the message that my body shape and weight are fine.

1	2	3	4	5
Never	Rarely	Sometimes	Often	Always

22. Overall, when I was growing up, my parents/caregivers were:

1	2	3	4	5	6

Not at all focused
on food or weight

Extremely focused
on food and weight

APPENDIX D

HEALTHY EATING SCALE

Directions for participants: Please circle what, in your opinion, an **adaptive** diet would include.

1. **Whole grain bread, brown rice, whole grain pasta**

1	2	3	4	5
Never	Rarely	Sometimes	Often	Always

2. **Portion size restriction**

1	2	3	4	5
Never	Rarely	Sometimes	Often	Always

3. **White bread, white rice, pasta**

1	2	3	4	5
Never	Rarely	Sometimes	Often	Always

4. **Starchy vegetables (i.e. potatoes)**

1	2	3	4	5
Never	Rarely	Sometimes	Often	Always

5. **Assorted fruits**

1	2	3	4	5
Never	Rarely	Sometimes	Often	Always

6. **No food restriction**

1	2	3	4	5
Never	Rarely	Sometimes	Often	Always

7. **Assorted fibrous vegetables (i.e. broccoli)**

1	2	3	4	5
Never	Rarely	Sometimes	Often	Always

8. **Lean protein**

1	2	3	4	5
Never	Rarely	Sometimes	Often	Always

9. **Dairy products**

1	2	3	4	5
Never	Rarely	Sometimes	Often	Always

10. **Calorie restriction**

1	2	3	4	5
Never	Rarely	Sometimes	Often	Always

11. **Sweets (i.e. ice cream, cake, candy etc.)**

1	2	3	4	5
Never	Rarely	Sometimes	Often	Always

12. **Salty snacks (i.e. potato chips, Fritos, Doritos etc.)**

1	2	3	4	5
Never	Rarely	Sometimes	Often	Always

13. **Fats (i.e. salad dressing, mayonnaise, butter, oil etc.)**

1	2	3	4	5
Never	Rarely	Sometimes	Often	Always

14. **Soda**

1	2	3	4	5
Never	Rarely	Sometimes	Often	Always

15. **Fruit juice**

1	2	3	4	5
Never	Rarely	Sometimes	Often	Always

16. **Unlimited caloric intake**

1	2	3	4	5
Never	Rarely	Sometimes	Often	Always

APPENDIX E

DIETING OTHERS SCALE

Directions for participants: For each item, please indicate the degree to which you are exposed to the given behaviors.

1. **How often do your friends talk about their weight?**

1	2	3	4	5
Never	Rarely	Sometimes	Often	Always

2. **How often do your friends talk about dieting or food restriction?**

1	2	3	4	5
Never	Rarely	Sometimes	Often	Always

3. **How often do your family members talk about their weight?**

1	2	3	4	5
Never	Rarely	Sometimes	Often	Always

4. **How often do your family members talk about dieting or food restriction?**

1	2	3	4	5
Never	Rarely	Sometimes	Often	Always

5. **How often have your partners talked about his or her weight?**

1	2	3	4	5
Never	Rarely	Sometimes	Often	Always

6. **How often have your partners talked about dieting or food restriction?**

1	2	3	4	5
Never	Rarely	Sometimes	Often	Always

7. **How often are you around someone who talks about her or his weight?**

1	2	3	4	5
Never	Rarely	Sometimes	Often	Always

8. **How often are you around someone who talks about dieting or food restriction?**

1	2	3	4	5
Never	Rarely	Sometimes	Often	Always

APPENDIX F

PEOPLE IN ENVIRONMENT

*Please place an **X** beside one of the following that best describes people in your environment. (Choose only one)*

___1. **Overall, people in my environment are never focused on food and weight.**

___2. **Overall, people in my environment are rarely focused on food and weight.**

___3. **Overall, people in my environment are sometimes focused on food and weight.**

___4. **Overall, people in my environment are often focused on food and weight.**

___5. **Overall, people in my environment are always focused on food and weight.**

APPENDIX G

BECK DEPRESSION INVENTORY

In each question, choose one statement from among the group of four statements that describes how you have been feeling during the **past few days.** Circle the number beside your choice.

Question 1

0 I do not feel sad.
1 I feel sad.
2 I am sad all the time and I can't snap out of it.
3 I am so sad or unhappy that I can't stand it.

Question 2

0 I am not particularly discouraged about the future.
1 I feel discouraged about the future.
2 I feel I have nothing to look forward to.
3 I feel that the future is hopeless and that things cannot improve.

Question 3

0 I do not feel like a failure.
1 I feel I have failed more than the average person.
2 As I look back on my life, all I can see is a lot of failure.
3 I feel I am a complete failure as a person.

Question 4

0 I get as much satisfaction out of things as I used to.
1 I don't enjoy things the way I used to.
2 I don't get any real satisfaction out of anything anymore.
3 I am dissatisfied or bored with everything.

Question 5

0 I don't feel particularly guilty.
1 I feel guilty a good part of the time.
2 I feel quite guilty most of the time.
3 I feel guilty all of the time.

Question 6

0 I don't feel I am being punished.
1 I feel I may be punished.
2 I expect to be punished.
3 I feel I am being punished.

Question 7

0 I don't feel disappointed in myself.
1 I am disappointed in myself.
2 I am disgusted with myself.
3 I hate myself.

Question 8

0 I don't feel I am any worse than anybody else.
1 I am critical of myself for my weaknesses or mistakes.

2 I blame myself all the time for my faults.
3 I blame myself for everything bad that happens.

Question 9
0 I don't have any thoughts of killing myself.
1 I have thoughts of killing myself, but I would not carry them out.
2 I would like to kill myself.
3 I would kill myself if I had the chance.

Question 10
0 I don't cry any more than usual.
1 I cry more now than I used to.
2 I cry all the time now.
3 I used to be able to cry, but now I can't cry even though I want to.

Question 11
0 I am no more irritated by things than I ever am.
1 I am slightly more irritated now than usual.
2 I am quite annoyed or irritated a good deal of the time.
3 I feel irritated all the time now.

Question 12
0 I have not lost interest in other people.
1 I am less interested in other people than I used to be.
2 I have lost most of my interest in other people.
3 I have lost all of my interest in other people.

Question 13
0 I make decisions about as well as I ever could.
1 I put off making decisions more than I used to.
2 I have greater difficulty in making decisions than before.
3 I can't make decisions at all anymore.

Question 14
0 I don't feel that I look any worse than I used to.
1 I am worried that I am looking old or unattractive.
2 I feel that there are permanent changes in my appearance that make me look unattractive.
3 I believe that I look ugly.

Question 15
0 I can work about as well as before.
1 It takes an extra effort to get started at doing something.
2 I have to push myself very hard to do anything.
3 I can't do any work at all.

Question 16

0 I can sleep as well as usual.
1 I don't sleep as well as I used to.
2 I wake up 1 – 2 hours earlier than usual and find it hard to get back to sleep.
3 I wake up several hours earlier than I used to and cannot get back to sleep.

Question 17
0 I don't get more tired than usual.
1 I get tired more easily than I used to.
2 I get tired from doing almost anything.
3 I am too tired to do anything.

Question 18
0 My appetite is no worse than usual.
1 My appetite is not as good as it used to be.
2 My appetite is much worse now.
3 I have no appetite at all anymore.

Question 19 (Circle 0 if you have been purposely trying to lose weight)
0 I haven't lost much weight, if any, lately.
1 I have lost more than five pounds.
2 I have lost more than 10 pounds.
3 I have lost more than 15 pounds.

Question 20
0 I am no more worried about my health than usual.
1 I am worried about physical problems such as aches and pains, or upset stomach, or constipation.
2 I am very worried about physical problems, and it's hard to think of much else.
3 I am so worried about my physical problems that I cannot think about anything else.

Question 21
0 I have not noticed any recent change in my interest in sex.
1 I am less interested in sex than I used to be.
2 I am much less interested in sex now.
3 I have lost interest in sex completely.

APPENDIX H

BODY APPRECIATION SCALE

1. I respect my body.

1	2	3	4	5
Never	Seldom	Sometimes	Often	Always

2. I feel good about my body.

1	2	3	4	5
Never	Seldom	Sometimes	Often	Always

3. On the whole, I am satisfied with my body.

1	2	3	4	5
Never	Seldom	Sometimes	Often	Always

4. Despite its flaws, I accept my body for what it is.

1	2	3	4	5
Never	Seldom	Sometimes	Often	Always

5. I feel that my body has at least some good qualities.

1	2	3	4	5
Never	Seldom	Sometimes	Often	Always

6. I take a positive attitude towards my body.

1	2	3	4	5
Never	Seldom	Sometimes	Often	Always

7. I am attentive to my body's needs.

1	2	3	4	5
Never	Seldom	Sometimes	Often	Always

8. My self worth is independent of my body shape or weight.

1	2	3	4	5
Never	Seldom	Sometimes	Often	Always

9. I do <u>not</u> focus a lot of energy being concerned with my weight or body shape.

1	2	3	4	5
Never	Seldom	Sometimes	Often	Always

10. My feelings toward my body are positive, for the most part.

1	2	3	4	5
Never	Seldom	Sometimes	Often	Always

11. I engage in healthy behaviors to take care of my body.

1	2	3	4	5
Never	Seldom	Sometimes	Often	Always

12. I do not allow unrealistically thin images of women presented in the media to affect my attitudes toward my body.

1	2	3	4	5
Never	Seldom	Sometimes	Often	Always

13. Despite its imperfections, I still like my body.

1	2	3	4	5
Never	Seldom	Sometimes	Often	Always

APPENDIX I

ALMOST PERFECT SCALE-REVISED

Indicate your agreement with each statement by writing the number in the space provided, using the following rating scale:

Strongly	Slightly	Neither Agree	Slightly	Strongly

Disagree	Disagree	Disagree	Nor Disagree	Agree	Agree	Agree
1	2	3	4	5	6	7

____ 1. I often feel frustrated because I can't meet my goals

____ 2. My best just never seems good enough for me

____ 3. I rarely live up to my high standards

____ 4. Doing my best never seems to be enough

____ 5. I am never satisfied with my accomplishments

____ 6. I often worry about not measuring up to my own expectations

____ 7. My performance rarely measures up to my standards

____ 8. I am not satisfied even when I know I have done my best

____ 9. I am seldom able to meet my own high standards for performance

____ 10. I am hardly ever satisfied with my performance

____ 11. I hardly ever feel that what I've done is good enough

____ 12. I often feel disappointed after completing a task because I know I could have done better

____ 13. I have high standards for my performance at work or school

____ 14. If you don't expect much out of yourself you will never succeed

____ 15. I have high expectations for myself

____ 16. I set very high standards for myself

____ 17. I expect the best from myself

____ 18. I try to do my best at everything I do

____ 19. I have a strong need to strive for excellence

____ 20. I am an orderly person

____ 21. Neatness is important to me

____ 22. I think things should be put away in their place

____ 23. I like to always be organized and disciplined

APPENDIX J

ROSENBERG SELF-ESTEEM SCALE

1. I feel that I am a person of worth, at least on an equal plane with others.

1	2	3	4
Strongly Disagree	Disagree	Agree	Strongly Agree

2. I feel that I have a number of good qualities.

1	2	3	4
Strongly Disagree	Disagree	Agree	Strongly Agree

3. All in all, I am inclined to feel that I am a failure.

1	2	3	4
Strongly Disagree	Disagree	Agree	Strongly Agree

4. I am able to do things as well as most people.

1	2	3	4
Strongly Disagree	Disagree	Agree	Strongly Agree

5. I feel I do <u>not</u> have much to be proud of.

1	2	3	4
Strongly Disagree	Disagree	Agree	Strongly Agree

6. I take a positive attitude towards myself.

1	2	3	4
Strongly Disagree	Disagree	Agree	Strongly Agree

7. On the whole, I am satisfied with myself.

1	2	3	4
Strongly Disagree	Disagree	Agree	Strongly Agree

8. I wish I could have more respect for myself.

1	2	3	4
Strongly Disagree	Disagree	Agree	Strongly Agree

9. I feel entirely useless at times.

1	2	3	4
Strongly Disagree	Disagree	Agree	Strongly Agree

10. At times, I think that I am no good at all.

1	2	3	4
Strongly Disagree	Disagree	Agree	Strongly Agree

APPENDIX K

INTERNALIZATION SUBSCALE OF THE SOCIOCULTURAL ATTITUDES TOWARD APPEARANCE QUESTIONNAIRE

1. Women who appear in TV shows and movies project the type of appearance that I see as my goal.

1	2	3	4	5
Definitely disagree	Mostly disagree	Neither agree nor disagree	Mostly agree	Definitely agree

2. I believe that clothes look better on thin models.

1	2	3	4	5
Definitely disagree	Mostly disagree	Neither agree nor disagree	Mostly agree	Definitely agree

3. Music videos that show thin models make me wish that I were thin.

1	2	3	4	5
Definitely disagree	Mostly disagree	Neither agree nor disagree	Mostly agree	Definitely agree

4. I do <u>not</u> wish to look like the models in magazines.

1	2	3	4	5
Definitely disagree	Mostly disagree	Neither agree nor disagree	Mostly agree	Definitely agree

5. I tend to compare my body to people in magazines and on TV.

1	2	3	4	5
Definitely disagree	Mostly disagree	Neither agree nor disagree	Mostly agree	Definitely agree

6. Photographs of thin women make me wish that I were thin.

1	2	3	4	5
Definitely disagree	Mostly disagree	Neither agree nor disagree	Mostly agree	Definitely agree

7. I wish I looked like a swimsuit model.

1	2	3	4	5
Definitely disagree	Mostly disagree	Neither agree nor disagree	Mostly agree	Definitely agree

8. I often read magazines like *Cosmopolitan*, *Vogue*, and *Glamour* and compare my appearance to the models.

1	2	3	4	5
Definitely disagree	Mostly disagree	Neither agree nor disagree	Mostly agree	Definitely agree

APPENDIX L

PERCEIVED SOCIOCULTURAL PRESSURES SCALE

1. **I've felt pressure from my friends to lose weight.**

1	2	3	4	5
Never	Seldom	Sometimes	Often	Always

2. **I've noticed a strong message from my friends to have a thin body.**

1	2	3	4	5
Never	Seldom	Sometimes	Often	Always

3. **I've felt pressure from my family to lose weight.**

1	2	3	4	5
Never	Seldom	Sometimes	Often	Always

4. **I've noticed a strong message from my family to have a thin body.**

1	2	3	4	5
Never	Seldom	Sometimes	Often	Always

5. **I've felt pressure from people I've dated to lose weight.**

1	2	3	4	5
Never	Seldom	Sometimes	Often	Always

6. **I've noticed a strong message from people I've dated to have a thin body.**

1	2	3	4	5
Never	Seldom	Sometimes	Often	Always

7. **I've felt pressure from the media (e.g., TV, magazines) to lose weight.**

1	2	3	4	5
Never	Seldom	Sometimes	Often	Always

8. **I've noticed a strong message from the media to have a thin body.**

1	2	3	4	5
Never	Seldom	Sometimes	Often	Always

APPENDIX M

POSITIVE AND NEGATIVE AFFECT SCALE

This scale consists of a number of words and phrases that describe different feelings and emotions. Read each item and then write the number in the space provided next to that word. Indicate to what extent you have felt this way in general, that is, on average. Use the following scale:

Very Slightly or Not at All 1	A Little 2	Moderately 3	Quite a Bit 4	Extremely 5

___1. **attentive**
___2. **strong**
___3. **irritable**
___4. **inspired**
___5. **afraid**
___6. **alert**
___7. **upset**
___8. **active**
___9. **guilty**
___10. **nervous**
___11. **excited**
___12. **hostile**
___13. **proud**
___14. **jittery**
___15. **ashamed**
___16. **scared**
___17. **enthusiastic**
___18. **distressed**
___19. **determined**
___20. **interested**

APPENDIX N

BODY ACCEPTANCE BY OTHERS SCALE

For each item, please **circle** the response that best captures your own experience.

1. **I've felt acceptance from my friends regarding my body shape and/or weight.**
   1 2 3 4 5

Never	Rarely	Sometimes	Often	Always

2. **My friends have sent me the message that my body shape and weight are fine.**

1	2	3	4	5
Never	Rarely	Sometimes	Often	Always

3. **I've felt acceptance from my family regarding my body shape and/or weight.**

1	2	3	4	5
Never	Rarely	Sometimes	Often	Always

4. **My family has sent me the message that my body shape and weight are fine.**

1	2	3	4	5
Never	Rarely	Sometimes	Often	Always

5. **I've felt acceptance from people I've dated regarding my body shape and/or weight.**

1	2	3	4	5
Never	Rarely	Sometimes	Often	Always

6. **People I've dated have sent me the message that my body shape and weight are fine.**

1	2	3	4	5
Never	Rarely	Sometimes	Often	Always

7. **I've felt acceptance from the media (e.g., TV, magazines) regarding my body shape and/or weight.**

1	2	3	4	5
Never	Rarely	Sometimes	Often	Always

8. **I feel that the media have sent me the message that my body shape and weight are fine.**

1	2	3	4	5
Never	Rarely	Sometimes	Often	Always

9. **I've felt acceptance from society (e.g., school, church, social settings) regarding my body shape and/or weight.**

1	2	3	4	5
Never	Rarely	Sometimes	Often	Always

10. **I feel that society has sent me the message that my body shape and weight are fine.**

1	2	3	4	5
Never	Rarely	Sometimes	Often	Always

APPENDIX O

BODY DISSATISFACTION SUBSCALE OF THE EATING DISORDER INVENTORY-2

Please indicate on this scale whether the question is true about you always, usually, often, sometimes, rarely, or never.

1. **I think that my stomach is too big.**

1	2	3	4	5	6
Always	Usually	Often	Sometimes	Rarely	Never

2. **I think that my thighs are too large.**

1	2	3	4	5	6
Always	Usually	Often	Sometimes	Rarely	Never

3. **I think that my stomach is just the right size.**

1	2	3	4	5	6
Always	Usually	Often	Sometimes	Rarely	Never

4. **I feel satisfied with the shape of my body.**

1	2	3	4	5	6
Always	Usually	Often	Sometimes	Rarely	Never

5. **I like the shape of my buttocks.**

1	2	3	4	5	6
Always	Usually	Often	Sometimes	Rarely	Never

6. **I think that my hips are too big.**

1	2	3	4	5	6
Always	Usually	Often	Sometimes	Rarely	Never

7. **I think that my thighs are just the right size.**

1	2	3	4	5	6
Always	Usually	Often	Sometimes	Rarely	Never

8. **I think that my buttocks are too large.**

1	2	3	4	5	6
Always	Usually	Often	Sometimes	Rarely	Never

9. **I think that my hips are just the right size.**

1	2	3	4	5	6
Always	Usually	Often	Sometimes	Rarely	Never

APPENDIX P

LIFE ORIENTATION TEST-REVISED (OPTIMISM)

For each item, please **circle** the response that best reflects your agreement with the statement.

1. **In uncertain times, I usually expect the best.**

1	2	3	4
Strongly Disagree	Disagree	Agree	Strongly Agree

2. If something can go wrong for me, it will.

1	2	3	4
Strongly Disagree	Disagree	Agree	Strongly Agree

3. I'm always optimistic about my future.

1	2	3	4
Strongly Disagree	Disagree	Agree	Strongly Agree

4. It's important for me to keep busy.

1	2	3	4
Strongly Disagree	Disagree	Agree	Strongly Agree

5. I hardly ever expect things to go my way.

1	2	3	4
Strongly Disagree	Disagree	Agree	Strongly Agree

6. I rarely count on good things happening to me.

1	2	3	4
Strongly Disagree	Disagree	Agree	Strongly Agree

7. Overall, I expect more good things to happen to me than bad.

1	2	3	4
Strongly Disagree	Disagree	Agree	Strongly Agree